## (12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

## (19) World Intellectual Property Organization International Bureau





(43) International Publication Date 20 January 2005 (20.01.2005)

**PCT** 

## (10) International Publication Number WO 2005/005797 A2

(51) International Patent Classification<sup>7</sup>: 3/20, 3/025, 3/08

F01N 3/035,

(21) International Application Number:

PCT/US2004/018536

(22) International Filing Date: 10 June 2004 (10.06.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data: 60/478,679

12 June 2003 (12.06.2003) US

- (71) Applicant (for all designated States except US): DON-ALDSON COMPANY, INC. [US/US]; 1400 West 94th Street, P.O. Box 1299, Minneapolis, MN 55440-1299 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): HOU, Xhixin, Jason [CN/US]; 2572 Oakridge Court, Maplewood, MN 55119 (US). WAGNER, Wayne, M. [US/US]; 120 Redwood Drive, Apple Valley, MN 55124 (US). ZHANG, Wenzhong [CN/US]; 13542 Foxberry Road, Savage, MN 55328 (US). STEINBRUECK, Edward, A. [US/US]; 16671 N. Hillcrest Court, Eden Prairie, MN 55346 (US). ANGELO, Theodore, G. [US/US]; 838 Idaho Avenue West, St. Paul, MN 55117 (US). WIEGANDT, Ted, J. [US/US]; 4126 Oakbrooke Curve, Eagan, MN 55112 (US).

ANDERSON, Mike [US/US]; 2817 106th Street West, Bloomington, MN 55431 (US).

- (74) Agent: BRUESS, Steven, C.; Merchant & Could P.C., P.O. Box 2903, Minneapolis, MN 55402-0903 (US).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

## Published:

without international search report and to be republished upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: METHOD OF DISPENSING FUEL INTO TRANSIENT FLOW OF AN EXHAUST SYSTEM

(57) Abstract: A system or method for controlling the delivery of fuel into the transient flow of an exhaust system to control emissions. A mathematical model representative of the exhaust system can be used to detennine, based on operating conditions of the exhaust system, a rate of fuel delivery suitable for achieving a desired result. The desired result can be to increase the temperature of a diesel particulate filter to a temperature suitable for regeneration without exceeding a temperature that may damage the diesel particulate filter.